

## **FBS19b – Serology Report Wording Guidelines**

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#### **1. Scope**

- 1.1. Analysts should follow the guidelines listed below when writing serology reports.

#### **2. Background**

- 2.1. To establish the practices for documenting the examination of evidence to conform to the requirements of the Department of Forensic Sciences (DFS) Forensic Science Laboratory (FSL) *Quality Assurance Manual*, the accreditation standards under ISO/IEC 17025:2005, and any supplemental standards.

#### **3. Safety**

- 3.1. Not applicable

#### **4. Materials Required**

- 4.1. Not applicable

#### **5. Standards and Controls**

- 5.1. The finalized forensic case reports are printed on Department of Forensic Science letterhead. Each report will include the following information, unless the laboratory has valid reasons for not doing so:

5.1.1. Report Title

5.1.2. Date of Report

5.1.3. Name and Address of Testing Laboratory

5.1.4. Laboratory Case Number

5.1.5. Submitting Agency Name, Address, Case Number and Submitting Officer's Name

5.1.6. Submission date(s) of items submitted for examination

5.1.7. Description and condition of items submitted for examination

5.1.8. Brief description of examination methods

5.1.9. Test results and conclusions

5.1.10. Disposition of items

5.1.11. Analysts Name, Title and Signature

## **6. Calibration**

- 6.1. Not applicable

## **7. Procedures**

Not every situation can, or should, be covered by a pre-set reporting statement. It is important that the analyst follows interpretation criteria established for a test when reporting results and/or conclusions. The interpretation criteria for each serology test may be found in the appropriate SOP. Following is a discussion of serology tests and examples of reporting statements that may be used.

### **Visual Examination for Presence of Blood/Semen**

A visual examination of an item may include the following methods:

- Macroscopic and microscopic
- Alternate Light Source (ALS)

If an item is visually positive for the presence of blood or semen, then usually a presumptive and/or confirmatory test is performed on the item.

If an item is visually negative for the presence of blood or semen, and no further testing is performed, then the item may be reported as such. For example:

*“A visual examination for the presence of stains which could contain [blood and/or semen] was performed on item # with negative results. No further examinations were performed.”*

*“No [blood and /or semen] was observed on [item] (item #) using a [macroscopic, microscopic, alternative light source] method(s). No further examinations were performed.”*

### **Blood Testing (Phenolphthalein and Hematrace)**

The phenolphthalein test (Kastle-Meyer) is used for the presumptive identification of blood. A confirmatory test, such as Hematrace, is required to positively identify a stain as containing blood. When reporting results in the beginning of the results discussion, you must first define the test that was used. The use of common descriptions may then be used for discussing subsequent results.

#### **a.) Phenolphthalein (Kastle-Meyer) testing**

Reporting phenolphthalein test results must include a general statement that the results are presumptive. For example:

*“The phenolphthalein test, a presumptive test for the presence of blood, was negative on [item] (item #). No further testing was performed.”*

*“Item # tested presumptively positive for the presence of blood.”*

*“The phenolphthalein test, a presumptive test for the presence of blood, was performed on item # with inconclusive results.”*

*“Items #-# tested presumptively positive for the presence of blood using the Kastle-Meyer test.”*

#### **b.) Phenolphthalein (Kastle-Meyer) and Hematrace testing**

Reporting phenolphthalein and Hematrace test results must include a general statement that the results are presumptive and confirmatory. For example:

*“The phenolphthalein test, a presumptive test for the presence of blood, was positive on Item #. Blood was confirmed on Item # using the Hematrace test.”*

*“Presumptive and confirmatory tests for the presence of blood were conducted on [item] (item #) with positive results.”*

*“The phenolphthalein test, a presumptive test for the presence of blood, was positive on Item #; however, due to insufficient sample quantity the presence of blood was not confirmed.”*

*“Items #-# tested presumptively positive for the presence of blood however, confirmatory test results were negative.”*

*“The Kastle-Meyer test, the presumptive test for the presence of blood, was*

*inconclusive for items #-#. Blood was confirmed on Items #-# using the Hematrace test.”*

*“The presumptive test for the presence of blood was inconclusive for [item] (item #). The confirmatory test was negative for [item] (item #).”*

**Semen Testing (Acid Phosphatase (AP), p30 and Microscopic examination for the presence of spermatozoa (Christmas Tree Stain)**

The AP test is used for the presumptive identification of semen. A confirmatory test, such as the p30 test and microscopic identification of spermatozoa, are required to positively identify a stain as containing semen. When reporting results in the beginning of the results discussion you must first define the test that was used. The use of common descriptions may then be used for discussing subsequent results.

a.) AP testing

Reporting acid phosphatase test results must include a general statement that the results are presumptive. For example:

*“Items #-# tested presumptively positive for the presence of semen using the acid phosphatase test.”*

*“[Item] (item #) tested presumptively positive for the presence of semen.”*

*“The acid phosphatase test, a presumptive test for the presence of semen, was negative on Item #. No further testing was performed.”*

*“The acid phosphatase test, a presumptive test for the presence of semen, was performed on [item] (item #) with inconclusive results.”*

b.) AP and p30 testing

Reporting acid phosphatase and p30 test results must include a general statement that the results are presumptive and confirmatory. For example:

*“The acid phosphatase test, a presumptive test for the presence of semen was negative for Item #. Semen was confirmed on this item by the presence of p30, a component of seminal fluid .”*

*“Presumptive and confirmatory tests for the presence of semen were conducted on [item] (item #) with positive results.”*

*“The acid phosphatase test, a presumptive test for the presence of semen was positive on Item #; however, due to insufficient sample quantity the presence of semen was not confirmed.”*

*“Items #-# tested presumptively positive for the presence of semen however, confirmatory test results were negative.”*

*“The acid phosphatase test, the presumptive test for the presence of semen, was inconclusive for items #-#. Semen was confirmed on Items #-# by the detection*

*of p30, a component of semen.”*

*“The presumptive test for the presence of semen was inconclusive for [item] (item #). The confirmatory test was negative for item #.*

c.) Microscopic examination for the presence of spermatozoa (Christmas Tree Stain)

Reporting microscopic identification of spermatozoa test results must include a general statement that the results are confirmatory. For example:

*“Semen was confirmed by the identification of spermatozoa on item #.”*

*“A microscopic examination for the identification of spermatozoa was performed on [items] (items #-#) however, none were found. No further testing was conducted.”*

d.) Acid Phosphatase and microscopic examination for the presence of spermatozoa (Christmas Tree Stain)

Reporting acid phosphatase and microscopic examination test results must include a general statement that the results are presumptive and confirmatory. For example:

*“The acid phosphatase test, a presumptive test for the presence of semen, was positive for item #. No spermatozoa were identified on extracts prepared from item #.”*

*“Item # tested presumptively positive for the presence of semen. Semen was confirmed by the identification of spermatozoa using the Christmas tree stain method.”*

e.) Acid Phosphatase, p30 testing and microscopic examination for the presence of spermatozoa (Christmas Tree Stain)

*“The acid phosphatase test, the presumptive test for the presence of semen, was positive for item #. No spermatozoa were identified on item # however, semen was confirmed on item # by the detection of p30, a component of semen.”*

## **8. Sampling**

8.1. Not applicable

## **9. Calculations**

9.1. Not applicable

## **10. Uncertainty of Measurement**

- 10.1. When quantitative results are obtained, and the significance of the value may impact the report, the uncertainty of measurement must be determined. The method used to determine the estimation of uncertainty can be found in the *FSL Quality Assurance Manual – Estimation of Uncertainty of Measurement (Section 5.4.6)*.

## **11. Limitations**

- 11.1. Not applicable

## **12. Documentation**

- 12.1. FBU Report of Results

## **13. References**

- 13.1. *Forensic Science Laboratory Quality Assurance Manual* (Current Version)
- 13.2. *FSL Departmental Operations Manuals* (Current Versions)
- 13.3. *FSL Laboratory Operations Manuals* (Current Versions)